



Warm-Up

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Name _____

A Number Challenge

Suppose your teacher gave you an assignment to add all of the numbers from 1 to 100 without using a calculator. How long do you think it would take? You could do it in about 30 seconds.

Here's how: Add 1 plus 100, which equals 101. Add 2 plus 99, which equals 101. Add 3 plus 98, which also equals 101. You are adding 50 pairs of numbers, which all equal 101. Therefore, you can multiply 50 times 101. This equals 5,050. Multiplication, of course, is simply a fast method of addition when you use the same numbers.

The mathematician who worked out this particular problem was named Carl Gauss. He lived from 1777 to 1855. As a college student, he discovered that a seventeen-sided

figure could be drawn with just a compass and a ruler. This was thought to be impossible.

During his lifetime, Gauss made many discoveries in the study of numbers and shapes. He studied the use of statistics. This is the science of collecting, using, and studying information from real events in life. Gauss also studied stars and planets. He became famous for discovering the orbit around the sun of the asteroid Ceres. See if you can add all the numbers from 1 to 100 in less than 30 seconds! Maybe you, too, will become a scientist or math expert!

Check Your Understanding

- Which of the following is an example of statistics?
 - determining World Series scores since 1920
 - estimating barrels of oil sold by a company in a year
 - figuring out grades a student gets over the course of a year
 - all of the above
- From the context of the passage, what can you infer about Ceres?
 - No one had known about its orbit until Gauss.
 - Ceres is a part of our solar system.
 - Ceres travels through a solar system and never returns.
 - both a and b
- Which word in the passage refers to "the study and use of numbers"?

a. astronomy	c. physics
b. data	d. statistics
- Which number would be added to 91 in the pattern described in the first paragraph?

a. 0	c. 10
b. 21	d. any number



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Warm-Up

Name _____

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The History of the Book

The first writing began with the Sumerians about 5,500 years ago. It was done on rectangular clay blocks. Most of the time this writing contained lists of materials or words. Writing in Egyptian symbols was done on papyrus about 5,000 years ago. Papyrus was made from reeds that grew in the water. These sheets of papyrus were rolled around wooden poles. Several **scrolls** of this type made a book. Later, smaller rolls of papyrus were used. They could be unwound and studied.

The Greeks got their papyrus from a port city called Byblos. They used rolls of papyrus, but they also developed the idea of folding papyrus leaves together and binding them with a kind of string or thread. They used the name of the port, Byblos, for these bound sheets of

folded paper. The word *bible*, meaning “book,” has come to us through that city’s name.

People in northern India wrote on sheets of birch bark and collected written sheets in wooden boxes. The Chinese used bamboo tablets until about 2,200 years ago when they developed scrolls made of the by-products of silk production. Some Middle Easterners wrote on animal skins. This leather parchment was invented about 2,165 years ago. The sheets were folded to look somewhat like our modern books.

The invention of the printing press changed books forever. No longer did books need to be written by hand. The folded sheets attached within a hard cover changed life for all readers.

Check Your Understanding

- Which of these materials served as a form of paper?
 - papyrus
 - parchment
 - birch bark
 - all of the above
- From the context of the passage, what is a **scroll**?
 - a dessert
 - a kind of book rolled around a cylinder
 - a port
 - a printing press
- Which of these phrases best describes a modern book?
 - a scroll
 - folded sheets attached within a durable cover
 - birch bark
 - a printing press
- From the context of the passage, what can you infer about all ancient books?
 - They were all written on papyrus.
 - They were inexpensive.
 - They were harder to use.
 - all of the above



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